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Pathfinder's Name

## Marine Invertebrates

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1. Be able to identify at least one example of fifteen of the following seashore animals:
- |                                 |                         |
|---------------------------------|-------------------------|
| a. Tunicate (Sea Squirt)        | k. Mussel or Clamworm   |
| b. Anemone (Sea Flower)         | l. Sea Jelly            |
| c. Chiton                       | m. Limpet               |
| d. Hermit Crab                  | n. Tube Worm            |
| e. Brittle Star or Serpent Star | o. Oyster               |
| f. Sea Urchin                   | p. Amphipod (Sand Flea) |
| g. Sea Cucumber                 | q. Sponge               |
| h. Bryozoa colony (Moss animal) | r. Sand Dollar          |
| i. Barnacle                     | s. Coral                |
| j. Sea Star                     | t. Ghost Crab           |
2. Make a collection or photographs of the following seashore animals:
- Three kinds of crabs
  - One kind of sea star
  - Any other five animals listed in requirement 1. Hard-bodied animals, such as crabs, sea star, and chitons, may be killed in a 5% solution of formaldehyde or a 70% solution of alcohol, and then dried by a fire. The sun will cause the color to fade. Soft-bodied animals must be kept in a 3% solution of formaldehyde or a 70% solution of alcohol. If commercial formalin is used in place of formaldehyde, the above percentage figures should be doubled.
3. Describe the following processes:
- The swimming action of a sea jelly \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - The method of an anemone capturing food \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c. The running of a crab \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. How does a sea star digest a clam or oyster when it has such a small mouth opening?  
\_\_\_\_\_  
\_\_\_\_\_

☐ 4. Name four low-tide animals and two high-tide animals.

Low-tide

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

High-tide

1. \_\_\_\_\_ 2. \_\_\_\_\_

☐ 5. Answer the following questions on relationships:

a. What relationship do crabs and barnacles have to insects?  
\_\_\_\_\_  
\_\_\_\_\_

b. What relationship does the sea squirt have to man?  
\_\_\_\_\_  
\_\_\_\_\_

c. Name a common land dweller that is related to the clamworm.  
\_\_\_\_\_  
\_\_\_\_\_

d. The octopus belongs to the phylum Mollusca. Which two animals listed in No. 1 are related to the octopus?  
1. \_\_\_\_\_ 2. \_\_\_\_\_

e. Sea star, sea cucumber, and sea urchin all belong to the phylum Echinodermata. Why do they belong together? (Clue: Find out what "Echinodermata" means.)

Echinodermata \_\_\_\_\_

Why together \_\_\_\_\_  
\_\_\_\_\_

- 6. Give an oral report on two of the following activities:
- a. Visit a seashore at night and by means of a flashlight observe the activity of animals on shore and in the water. Notice the many plants and animals visible when the beam of light is directed into the water. These minute organisms are called plankton.
  - b. Tow a fine-mesh cloth or regular plankton net through the water and observe through a microscope the many tiny animals and plants that are collected.
  - c. Select three items under #1 that are important economically. Explain why they are important.

	Animal	Importance
1.	_____	_____
2.	_____	_____
3.	_____	_____